Application No.: 09/911,819   Docket No.: MWS-077RCE2

REMARKS

Claims 1-3, 5-32 and 34-56 are pending in this application. Claims 1-3, 5-32 and 34-56 have been rejected. Claims 1, 11, 17, 21, 23, 29, 39, 45 and 49 have been amended. No new matter has been added. Applicants submit that the pending claims are patentable and in condition for allowance. Applicants respectfully request reconsideration of the outstanding rejections and allowance of all pending claims in view of the reasons set forth below.

I. Examiner Interview

Applicants' representative thanks the Examiner for the courtesies extended during the telephone interview conducted on July 11, 2007. During the interview the Examiner indicated that he believed claims should be amended to include features discussed in the specification. Applicants present above amendments in response to the Examiner's request. Applicants believe that the amended claims are patentable and in condition for allowance.

II. Claim Amendments

Applicants amend claims 1 and 29 to recite the additional steps of "storing the description information in a storage device, where the description information allows the call to the function in the first language to be associated with a call to a corresponding function in a second language," "identifying a call to the function in the first language," and "retrieving the stored description information for the function from the storage device." Applicants amend claims 11 and 39 to recite the additional steps of "identifying a call to a function in the first language" and "retrieving an item from the file of description items." Applicants amend claims 21 and 49 to recite the additional steps of "identifying a call to the function in the first language" and "retrieving the description file."

Applicants further amend claims 1, 11, 21, 29 and 39 to delete the language "without" and to recite "wherein translating uses the description information instead of the definition of the function."

Applicants further amend claim 49 to delete the language "without" and to recite "wherein the translation uses the description information instead of the definition of the function."

11

Application No.: 09/911,819 .   Docket No.: MWS-077RCE2

Applicants amend dependent claims 17, 23 and 45 according to the amendments made to the independent claims upon which each depend.

III. Claim Rejections under 35 U.S.C. § 102

Claims 1-3, 5-7, 11-13, 17, 20, 29-32, 34-35, 39, 40-41, 45 and 48 are rejected under 35 U.S.C. § 102(b) as being anticipated by Shannon et al., "Mapping the Interface Description Language Type Model in C", November 1989, IEEE Transactions on Software Engineering, Vol. 15. No. 11, (hereinafter "Shannon"). Applicants respectfully traverse the rejection.

Shannon discusses how to map the IDL structure specifications into data structure declarations of a particular target language, the C programming language, (page 1333, right column, § 1). IDL is a notation for describing the characteristics of data structures passed among collections of cooperating processes in a programming environment, (page 1333, abstract). A data structure is a way of storing data in a computer so that it can be used efficiently. Shannon discusses a tool, the IDL translator, to map descriptions into code fragments in one of several target programming languages, (page 1333, left column, § 1).

A. Claim 1

Ameded claim 1 recites, among other elements,
"identifying a call to the function in the first language;
retrieving the stored description information for the function from the storage device; and
translating the call to the function in the first language into the call to the corresponding function in the second language using the description information, wherein translating uses the description information instead of the definition of the function."

Shannon does not disclose these claim elements.

For example, Shannon does not disclose "retrieving the stored description information for the function from the storage device," as required by claim 1. Description information, as used in the Applicants' claim 1, includes information about the function used to translate a source language call to the function into a target language call to a corresponding function, (Present Application, p. 4, lines 23-26). Shannon discusses an Interface Description Language (IDL) as a notation for describing the characteristics of data structure passed among a collection

12

of cooperating processes, (Shannon, p. 1333, left column, ¶1). The IDL of Shannon does not include information about a function. Contrary to the Examiner's interpretation, the IDL of Shannon is not equivalent to Applicants' description information, (Office Action, p. 2, last ¶ and p. 13, lines 8-9). Shannon indicates that IDL is used to specify intermediate representations communicated between phases of various compilers, (page 1333, left column, ¶ 1). Shannon also indicates mapping an IDL specification to a target module, (page 1334, left column, ¶ 4). As such, in Shannon, the IDL specifications are mapped to the target module and are not used to translate "the function in the first language into the call to the corresponding function in the second language," as required by Applicants' claim 1.

Moreover, since the Examiner interprets the IDL as being equivalent to the Applicant's description information, the Examiner seems to agree with the Applicants that IDL is not the "first language."

Furthermore, claim 1 recites that "translating uses the description information instead of the definition of the function." The definition of the function is processed to create the description information. Once the definition information is created, the translating does not need to process the definition of the function. Shannon does not disclose that the IDL specifications or any other construct "uses the description information instead of the definition of the function" as required by claim 1.

On a further note, Applicants respectfully submit that IDL is not a *programming* language. IDL is a notation for describing the characteristics of data structures passed among cooperating processes. Shannon indicates that IDL is language independent, (page 1333, right column, § 9). As such, Shannon does not disclose "identifying a call to the function in the *first language*," as required by Applicants' claim 1. Applicants respectfully direct the Examiner to Shannon's Fig. 3. In Fig. 3, Shannon indicates a "user code" that is compiled in C compiler. The IDL specifications, separate from the user code, are fed into the C compiler. Applicants submit that Shannon's Fig. 3 indicates that the IDL is not the "first language" and is just used during compilation of the user code.

As such, Shannon does not disclose each and every element of amended claim 1. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claim 1 under U.S.C. § 102(b).

13

Application No.: 09/911,819   Docket No.: MWS-077RCE2

B. Claims 2-3 and 5-7

Claims 2-3 and 5-7 depend on claim 1 and as such incorporate the elements of claim 1. Therefore claims 2-3 and 5-7 are allowable for at least the same reasons discussed above for claim 1. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claims 2-3 and 5-7 under U.S.C. § 102(b).

C. Claim 11

Claim 11 recites, among other elements,

"providing a file of description items, where one or more items include description information about one or more functions associated with a first language, identifying a call to a function in the first language; retrieving an item from the file of description items; using the description information for the function to translate a call to the function in the first language into a call to a corresponding function in a second language, wherein translating uses the description information instead of the definition of the function; and using the file of description items to translate a first program file into a second program file."

Shannon does not disclose at least these claim elements.

In addition to the arguments presented above regarding claim 1, Shannon fails to disclose "a file of description items, where one or more items include description information about one or more functions associated with a first language" as required by claim 11. The language identified by the Examiner as disclosing this feature refers to the IDL node declarations and the structures specified in IDL, (Office Action, p. 4, last ¶).

Applicants respectfully submit that the *description information* disclosed in claim 11 is not the same as the IDL node declarations discussed in Shannon. Shannon does not disclose a file of description items, where one or more items include *description information* about one or more functions as recited in claim 11. As argued above, the description information of the present application is different than IDL basic types of data structures. The description information, as used in the present application enables to translate a call to a function in a first language into a call to a corresponding function in a second language. In contrast, the IDL specifications of Shannon are used for the compiler and not for translating calls. In Shannon, the user code is already in the target programming language, namely the C language.

14

As such, Shannon does not disclose every feature of claim 11. Therefore Shannon does not support a valid 35 U.S.C. §102(b) rejection of claim 11. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claim 11 under U.S.C. § 102(b).

D. Claims 12-13, 17 and 20

Claims 12-13, 17 and 20 depend on claim 11 and as such incorporate each and every element of claim 11. Claims 12-13, 17 and 20 are therefore allowable for at least the same reasons presented above for claim 11. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claims 12-13, 17 and 20 under U.S.C. § 102(b).

E. Claims 29-32 and 34-35

Claim 29 recites similar elements to claim 1. In light of the arguments presented above with respect to claim 1, Applicants submit that claim 29 includes patentable features. Claims 30-32 and 34-35 depend on claim 29 and as such incorporate the elements of claim 29. Applicants respectfully submit that Shannon does not disclose each and every element of claims 29-32 and 34-35. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claims 29-32 and 34-35 under U.S.C. § 102(b).

F. Claims 39-41, 45 and 48

Claim 39 recites similar elements to claim 11. In light of the arguments presented above with respect to claim 11, Applicants submit that claim 39 includes patentable features. Claims 40-41, 45 and 48 depend on claim 39 and as such incorporate each and every element of claim 39. Applicants respectfully submit that Shannon does not disclose each and every element of claims 39-41, 45 and 48. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claims 39-41, 45 and 48 under U.S.C. § 102(b).

15

Application No.: 09/911,819   Docket No.: MWS-077RCE2

IV. Claim Rejections under 35 U.S.C. § 103

A. Claims 8-10, 14-16, 18-19, 36-38, 42-44 and 46-47

Claims 8-10, 14-16, 18-19, 36-38, 42-44 and 46-47 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shannon in view of Bjarne Stroustrup, "the C++ Programming Language", 2nd Edition, copyright 1991 (hereinafter "Stroustrup"). Applicants respectfully traverse this rejection.

1. Claims 8-10

Claims 8-10 depend from independent claim 1 and as such incorporate each and every element of claim 1. The combination of Shannon and Stroustrup does not teach or suggest at least "translating the call to the function in the first language into the call to the corresponding function in the second language using the description information, wherein translating uses the description information instead of the definition of the function," as required by claim 1Therefore the combination of Shannon and Stroustrup do not disclose the features of claims depending from claim 1, namely claims 8-10.

As presented above in the 102(b) arguments with respect to claim 1, Shannon is silent with respect to "translating the call to the function in the first language into the call to the corresponding function in the second language using the description information, wherein translating uses the description information instead of the definition of the function." Stroustrup does not cure the shortcomings of Shannon with respect to at least these elements of claim 1.

Stroustrup describes the programming language C++. The language identified by the Examiner at page 8 of the Office Action refers to the command line arguments and the values of arguments in C++, (Stroustrup, p. 87, § 3.1.6). Command line arguments and argument values are not the same as "the description information" recited in claim 1.

For example, Stroustrup discusses how to present an expression as a command line argument, (Stroustrup p. 87, § 3.1.6). Stroustrup recites "main () is given two arguments specifying the number of arguments, usually called argc, and an array of arguments, usually called argv. The arguments are character strings, so the type of argv is char*[argc+1]." The

16

command line arguments corresponding to an expression are not the "description information," as required by claim 1, and thus, claims 8-10.

A combination of Shannon and Stroustrup does not teach or suggest still other features of claim 1 or claims depending therefrom. For example, a combination of Shannon and Stroustrup does not disclose or suggest that "translating uses the description information instead of the definition of the function," as further required by claim 1. As presented above in the 102(b) arguments with respect to claim 1, Shannon does not disclose that the IDL specifications or any other construct that "uses the description information instead of the definition of the function," as required by claim 1. Stroustrup fails at curing the shortcomings of Shannon regarding at least this claim element. Stroustrup describes one programming language, namely the programming language C++. Stroustrup is silent about any translation from or to the programming language C++.

For at least the reasons presented above, the combination of Shannon and Stroustrup does not teach or suggest each and every element of claim 1. As such, dependent claims 8-10 are also patentable over Shannon in view of Stroustrup as the combination of Shannon and Stroustrup fail to teach or suggest each and every element of claims 8-10. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claims 8-10 under U.S.C. § 103(a).

2. Claims 14-16 and 18-19

Claims 14-16 and 18-19 depend on independent claim 11 and as such incorporate each and every element of claim 11. In addition to the arguments presented above in the 102(b) arguments with respect to claim 11, Shannon and Stroustrup fail to teach or suggest at least "a file of description items, where one or more items include description information about one or more functions associated with a first language," as required by claim 11. As such, the combination of Shannon does not teach or suggest each and every element of claim 11. Since Shannon and Stroustrup do not disclose or suggest the features of claim 11, these references cannot disclose or suggest the features of dependent claims 14-16 and 18-19. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claims 14-16 and 18-19 under U.S.C. § 103(a).

17

Application No.: 09/911,819   Docket No.: MWS-077RCE2

3. Claims 36-38

Claim 29 recites similar elements to claim 1. In light of the arguments presented above in the 102(b) arguments with respect to claim 1, Applicants respectfully submit that Shannon, in view of Stroustrup, does not teach or suggest each and every element of claim 29. Claims 30-32 and 34-35 depend on claim 29 and as such incorporate the elements of claim 29. Claims 36-38 are therefore allowable for at least the same reasons as claim 29. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claims 36-38 under U.S.C. § 103(a).

4. Claims 42-44 and 46-47

Claim 39 recites similar elements to claim 11. In light of the arguments presented above in the 102(b) arguments with respect to claim 11, Applicants respectfully submit that Shannon, in view of Stroustrup, does not teach or suggest each and every element of claim 39. Claims 42-44 and 46-47 depend from claim 39 and as such incorporate each and every element of claim 39. Claims 42-44 and 46-47 are therefore allowable for at least the same reasons as claim 39. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claims 42-44 and 46-47 under U.S.C. § 103(a).

B. Claims 21-28 and 49-56

Claims 21-28 and 49-56 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Elmroth et al., "A Web Computing Environment for the SLICOT Library"' December 2000, Brite-Euram III, Networks Programme NICONET (hereinafter "Elmroth"), in view of Research Systems, "IDL", copyright 1994, further in view of Shannon. Applicants respectfully traverse this rejection.

1. Claim 21

Claim 21 recites, among other elements,

"creating a function library and a description file from the library file, the function library including one or more functions defined by a second language, each function in the function library being a translated version of a function in the library file, and the description file including description information about each function in the library file, wherein the description

18

information enables translation of a call to the function in the first language into a call to a corresponding function in the second language, wherein translating uses the description information instead of the definition of the function;

indent identifying a call to the function in the first language;

retrieving the description file; and

using the description file to translate a program file from the first language into the second language, wherein each call in the program file to a function in the library file is translated into a call to a corresponding function in the second language."

Elmroth, in view of Research Systems, further in view of Shannon does not teach or suggest these limitations.

Elmroth discusses a prototype computing environment for computations related to the design and analysis of control systems using Subroutine Library In Systems and Control Theory (SLICOT) software library. The language identified by the Examiner refers to the possibility to download matrices in Fortran data format, Latex format, Matlab and Scilab binary format on the local computer and to save complete sessions, (Elmroth, p. 6, § 1).

Applicants respectfully submit that the ability to download a file in different formats is not equivalent to "creating a function library and description file from the library file" "wherein the description information enables translation of a call to the function in the first language into a call to a corresponding function the second language," as required by claim 21.

The Examiner states that Research Systems discloses definition language, IDL and mapping various application functions to a fourth-grade generation programming language alike C, and using IDL file (Office Action, p. 10, line 6). Applicants have previously argued (e.g., the Response to Office Action mailed March 25, 2005) and continue to argue that the IDL language of Research Systems is no the same IDL of an Interface Description Language as referred in Shannon. The IDL of Research Systems is a software for data analysis, visualization and application development. Research Systems use IDL as an abbreviation for Interactive Data Language. Shannon uses IDL as an abbreviation for Interface Description Language. Thus, the Examiner's reference to Research Systems IDL is not relevant to the disclosure of Shannon and further is not relevant to the elements of claim 21.

As such, Applicants respectfully submit that claim 21 is patentable over Elmroth in view of Research Systems in further view of Shannon as the combination of Elmroth, Research

Systems and Shannon fail to teach or suggest each and every element of claim 21. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claim 21 under U.S.C. § 103(a).

2. Claims 22-28

Claims 22-28 depend from independent claim 21 and as such incorporate each and every element of claim 21. Claims 22-28 are therefore allowable for at least the same reasons as claim 21. In view of the above comments, Applicants kindly request the Examiner to reconsider and withdraw the rejection of claims 22-28 under U.S.C. § 103(a).

3. Claims 49-56

Claim 49 recites similar elements to claim 21. As presented above with respect to claim 21, the combination of Elmroth, Research Systems and Shannon do not teach or suggest at least "the description file including description information about each function in the library file," as required by claim 49. Claims 50-56 depend on claim 49 and as such incorporate each and every element of claim 49. Claims 50-56 are therefore allowable for at least the same reasons as claim 49. Applicants respectfully submit that Elmroth in view of Research Systems in further view of Shannon also fails to detract from the patentability of claims 49-56. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claims 49-56 under U.S.C. § 103(a).

20

☑024/024

Application No.: 09/911,819

Docket No.: MWS-077RCE2

CONCLUSION

In view of the above amendments and comments, Applicants believe the pending application is in condition for allowance and urges the Examiner to pass the claims to allowance. Should the Examiner feel that a teleconference would expedite the prosecution of this application, the Examiner is urged to contact the Applicants' attorney at (617) 227-7400.

Please charge any shortage or credit any overpayment of fees to our Deposit Account No. 12-0080, under Order No. MWS-077RCE2. In the event that a petition for an extension of time is required to be submitted herewith, and the requisite petition does not accompany this response, the undersigned hereby petitions under 37 C.F.R. § 1.136(a) for an extension of time for as many months as are required to render this submission timely. Any fee due is authorized to be charged to the aforementioned Deposit Account.

Dated: August 10, 2007

Respectfully submitted,
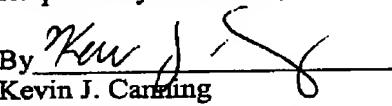
By _____
Kevin J. Canning
Registration No.: 35,470
LAHIVE & COCKFIELD, LLP
One Post Office Square
Boston, Massachusetts 02109-2127
(617) 227-7400
(617) 742-4214 (Fax)
Attorney/Agent For Applicant

21